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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
3100 Port of Benton Blvd • Richland, WA 99352 • (509) 372-79

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August 23, 2007

Ms. Shirley J. Olinger, Acting Manager
Office of River Protection
United States Department of Energy
P.O. Box 450, MSIN: H6-60
Richland, Washington 99352

Mr. William S. Elkins, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, MSIN: H4-02
Richland, Washington 99354

Re: Submittal of Hanford Facility RCRA Permit Modification Notification Form 24590-HLW-PCN-ENV-06-025; Class 1 Modification to the Hanford Facility Dangerous Waste and Resource Conservation and Recovery Act (RCRA) Permit, for the Treatment, Storage, and Disposal of Dangerous Waste, Part III, Operating Unit 10 (Waste Treatment and Immobilization Plant [WTP]), WA7890008967

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Dear Ms. Olinger and Mr. Elkins:

The Department of Ecology approves the referenced Class 1 Modification. The approved Hanford Facility RCRA Permit Modification Notification Form is enclosed.

Modification 24590-HLW-PCN-ENV-06-025 submits *High Level Waste Vitrification System Melter Cave Support Handling System Melter Caves 1 & 2 Design Proposal Drawing Decontamination Tank Process Flow Diagram*, 24590-HLW-M0-HSH-P0075, Revision 1. The modification includes the addition of the parts washer drain line, which transfers waste from the parts washer (HSH-MHAN-00041/000057) to the decontamination tank (HSH-TK-00001/00002).

The design of this drain line is unique to the WTP. The drain line is embedded in a concrete wall before entering the decontamination pit (H-0304A/0310A). The embedded line makes a horizontal right angle turn and exits the wall adjacent to the decontamination tank where it then turns downward and slips into an upward facing 3x2 reducer attached to the tank. The routing of the drain line is intended to minimize the risk of damage to the line from mechanical handling activities within the decontamination pit. The short length of exposed pipe within the decontamination pit is inadequate to accommodate thermal expansion of the tank. The slip joint design allows differential movement between the tank and the drain line, and thus eliminates secondary stress in the line due to thermal expansion of the tank. We believe this design is adequate considering the activities present in the decontamination pit. In the unlikely event that the line should plug or leak, there is regulated secondary containment in the decontamination pit.

As a result of this modification, a permit condition will be added to the WTP permit requiring demonstration of the parts washer drain line during system testing prior to receipt of waste. The demonstration must validate that the parts washer drain line does not cause a release of dangerous waste during transfer and meets the intent of the tank system regulations in Washington Administrative Code 173-303-640(3)(e).

The parties have agreed that during the transition period from permit drawings to engineering source drawings, those items not requiring an installation inspection or inclusion in the Independent Qualified Registered Professional Engineer report may be shown in phantom. Ecology is approving design changes identified in the Permittees' submittal. However, decisions regarding the regulation of items shown in phantom will be made at a later date. At the end of the transition period, permit submittals will contain engineering source documents and will be incorporated into the permit as described in Ecology Publication # 07-05-006 (www.ecy.wa.gov/biblio/nwp.html).

If there are any questions, contact me at 509-372-7882 or Ed Fredenburg at 509-372-7899.

Sincerely,

Brenda L Becker-Khaleel

Brenda Becker-Khaleel
WTP Permit Lead
Nuclear Waste Program

trw/jc
Enclosure

cc electronic w/enc:
John Eschenberg, USDOE
Lori Huffman, USDOE
Tony McKarns, USDOE
Gae Neath, USDOE
Don Sommer, USDOE
William Taylor, USDOE
Brad Erlandson, BNI
Peggy Fisher, BNI
Stan Hill, BNI
Dennis Klein, BNI
Sandi Murdock, BNI
Phil Peistrup, WGI

cc w/enc:
H-0-8
Administrative Record: Tank Waste Treatment Requirements ✓
Environmental Portal
USDOE-ORP Correspondence Control

Quarter Ending 09/30/2007

24590-HLW-PCN-ENV-06-025

Hanford Facility RCRA Permit Modification Notification Form

Part III, Operating Unit 10

Waste Treatment and Immobilization Plant

Index

Submitted by Co-Operator:

D. A. Klein — Date: 6/18/07

Reviewed by ORP Program Office:

S. J. Olinger — Date: 7/23/07

Quarter Ending 09/30/2007

24590-HLW-PCN-ENV-06-025

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
Waste Treatment and Immobilization Plant	**Part III, Operating Unit 10**

Description of Modification:

The purpose of this Class 1 prime modification is to update the HLW Vitrification System HSH Melter Caves 1 & 2 Design Proposal Drawing Decontamination Tank Process Flow Diagram (24590-HLW-M0-HSH-P0075), located in Appendix 10.1 of the Dangerous Waste Permit (DWP).

Please replace the following drawing in Appendix 10.1 of the Dangerous Waste Permit:

Appendix 10.1			
Replace	24590-HLW-M0-HSH-P0075	Rev. 0	24590-HLW-M0-HSH-P0075 Rev. 1

The referenced PFD is complete revision. It incorporates vendor design details and editorial changes as described in Note 21. This modification requests Ecology approval of the specific changes to this drawing that are identified in Note 21. The major changes are summarized below:

- Updated symbols under Legend
- Modified Note 1 to clarify operations of spray ring
- Deleted Notes 3 through 6 and 10 through 15
- Added Notes 17 through 21
- Added callouts for room/corridor and Melter Cave
- Added connections to electrical signal lines and junction boxes
- Added drain line to the Decontamination Tank from the parts washer
- Deleted jumper valves from the tank drain line
- Revised nozzle ID numbers and added Nozzle/Connection Identification Table
- Other editorial changes

There are no outstanding change documents associated with this drawing.

WAC 173-303-830 Modification Class: [1] [2]	Class 1	Class [1]1	Class 2	Class 3
Please mark the Modification Class:		X		

Enter Relevant WAC 173-303-830, Appendix I Modification citation number: N/A

Enter wording of WAC 173-303-830, Appendix I Modification citation:

In accordance with WAC 173-303-830(4)(d)(i), this modification notification is requested to be reviewed and approved as a Class [1]1 modification. WAC 173-303-830(4)(d)(ii) states, "Class 1 modifications apply to minor changes that keep the permit current with routine changes to facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the director may require prior approval."

Modification Approved: [X] Yes [ ] No (state reason for denial)

Reason for denial:

Reviewed by Ecology:

S. Dahl 8/23/07 Date

[1] Class 1 modifications requiring prior Agency approval.

[2] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class '1, if applicable.